

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte DEAN L. SICKING, JOHN D. REID,  
RONALD K. FALLER, BRIAN G. PFEIFER,  
BARRY T. ROSSON and JOHN R. ROHDE

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Appeal No. 2000-0523  
Application 08/583,307

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ON BRIEF

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Before CALVERT, FRANKFORT and McQUADE, Administrative Patent Judges.

McQUADE, Administrative Patent Judge.

DECISION ON APPEAL

Dean L. Sicking et al. appeal from the final rejection of claims 1 through 17, all of the claims pending in the application. We reverse.

THE INVENTION

The invention relates to a roadway guardrail barrier  
having

an effective depth or capture area intended to receive the moving vehicle in a recessed portion of the guardrail barrier bounded by upper and lower curved portions projecting toward the roadway to stabilize the vehicle and reduce the tendency for the vehicle to vault over or dive under the barrier or to roll when redirected by holding the vehicle against upward and downward motion [specification, page 1].

Claim 1 is illustrative and reads as follows:

1. A guardrail barrier that balances moment of inertia and membrane effect without requiring more material to reduce the tendency of high center of mass vehicles from turning over comprising:

outer curves;

a central portion between said outer curves;

the central portion and outer curves being positioned to provide an effective depth of between 9 to 15 inches.

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THE PRIOR ART

The references relied upon by the examiner as evidence of anticipation and obviousness are:

Martin et al. (Martin) 1951	2,536,760	Jan. 2,
Brown et al. (Brown) 1965	3,214,142	Oct. 26,

THE REJECTIONS

Claims 1 through 17 stand rejected under 35 U.S.C. § 112, second paragraph, as failing to particularly point out and distinctly claim the subject matter the appellants regard as the invention.

Claims 1 through 12 and 14 through 17 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Brown, and in the alternative under 35 U.S.C. § 103 as being obvious over Brown.

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Claim 13 stands rejected under 35 U.S.C. § 103 as being obvious over Brown.

Claims 1 through 17 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Martin, and in the alternative under 35 U.S.C. § 103 as being obvious over Martin.

Attention is directed to the appellants' brief (Paper No. 17) and to the examiner's answer (Paper No. 18) for the respective positions of the appellants and the examiner with regard to the merits of these rejections.

#### DISCUSSION

##### I. The 35 U.S.C. § 112, second paragraph, rejection

The second paragraph of 35 U.S.C. § 112 requires claims to set out and circumscribe a particular area with a reasonable degree of precision and particularity. In re Johnson, 558 F.2d 1008, 1015, 194 USPQ 187, 193 (CCPA 1977).

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In determining whether this standard is met, the definiteness of the language employed in the claims must be analyzed, not in a vacuum, but always in light of the teachings of the prior art and of the

particular application disclosure as it would be interpreted by one possessing the ordinary level of skill in the pertinent art. Id.

The examiner considers appealed claims 1 through 17 to be indefinite because they "are generally narrative in form and replete with indefinite and functional or operational language" (answer, page 3). The stated reasoning for this determination, which indicates that the examiner's "generally narrative" concern stems from the so-called functional or operational language, is that:

The following terms or phrases in claims 1-17 are not self-explanatory and are not defined in the claims such that their physical association with the structure of the guardrail system is understood: effective depth, length of the edge, area of the edge, crush strength, depth, width, length, Xbar, Ybar, Ix, Sx, Syl, Sy2, surface contact, C-max, bearing area, and total bearing area.

In claim 2, the functional recitation that the guardrail system is "tailored to ... occupant compartment" is indefinite because it is not supported by recitation in the claim of sufficient structure to accomplish the function. Likewise, in claim 8, the functional recitation that the "occupant compartment is not intruded upon" is indefinite because it is not supported by recitation in the claim of sufficient structure to accomplish the function.

In claims 9 and 10, it is unclear if the phrases "an effective depth," "an area edge [sic, edge area]," and "a moment of inertia" are referencing the effective depth, area edge, and moment of inertia previously recited in claims 1 and 2. Also, it is unclear as to the meaning of "first and second set of characteristics" of claim 9 [answer, pages 3 and 4].

While admitting that the terms or phrases listed in the first paragraph of this passage are defined in (or at least understandable in light of) the underlying specification, the examiner submits that the use of the specification to interpret these terms or phrases amounts to an improper reading of the specification into the claims (see pages 6 and 7 in the answer). It is well settled, however, that it is entirely proper to use the specification to interpret what is meant by a word or phrase in a claim, and that this is not to be confused with the improper addition of an extraneous limitation from the specification wholly apart from any need to interpret the word or phrase.

In re Paulsen, 30 F.3d 1475, 1480, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994). Here, the use of the appellants' admittedly enlightening specification to interpret the claim language in question is entirely proper and does not amount to an improper

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reading of limitations into the claims.



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The examiner's criticism of claims 2 and 8 as being indefinite simply because the functional limitations therein are not supported by a corresponding recitation of structure is also unsound. There is nothing intrinsically wrong with defining something by what it does rather than by what it is. In re Hallman, 655 F.2d 212, 215, 210 USPQ 609, 611 (CCPA 1981); In re Swinehart, 439 F.2d 210, 213, 169 USPQ 226, 228 (CCPA 1971).

As for examiner's comments relating to claims 9 and 10, the phrases at issue clearly refer back to the corresponding phrases in parent claims 1 and 2, and the meaning of the first and second set of characteristics recited in claim 9 is readily apparent given the detailed definition thereof in the claim.

Thus, the examiner's position that the subject matter recited in claims 1 through 17 is indefinite is not well

founded.<sup>1</sup> Accordingly, we shall not sustain the standing  
35 U.S.C. § 112, second paragraph, rejection of these claims.

## II. The 35 U.S.C. § 102(b) and § 103 rejections

Brown and Martin, the references applied in support of  
the prior art rejections, disclose W-beam guardrail barriers.

The Brown barrier, which is shown in Figures 5 through 7  
of the reference,

consists of elongated metal elements, each of which

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<sup>1</sup>Although not indefinite, the claims might be easier to understand, even when read in light of the specification, if amended to: define the "edge" recited in claims 2, 3 and 9 as the --cross-sectional-- edge; define the "area" in the second set of claim 9 and in claim 10 as the --cross-sectional edge-- area; define the "length" recited in claim 10 as the --cross-sectional edge-- length; define the "edges" recited in claim 11 and the "edge" recited in claim 13 as the --end-- edge(s); and modify the second clause in claim 13 by changing "opening" to --openings-- and "sections" (second occurrence) to --openings--. In addition, the appellants may wish to review claim 17 with an eye toward resolving any inconsistency between the recitation of individual bearing areas of 0.079 square inches and a total bearing area of at least 5.6 square inches (also see pages 7, 8 and 17 in the specification).

is so configured as to form a deep longitudinal corrugation 1 at one edge and a similar deep longitudinal corrugation 2 at the other edge. Between these corrugations there is a flat area indicated at 3. If desired, the extreme edges of the barrier elements may be turned inwardly as indicated at 4 and 5 in FIGS. 5 and 6 [column 2, lines 17 through 24].

The Martin barrier consists of a rail 12 formed of a plurality of interconnected members 14. These members 14

are of a corrugated form and have an angular or re-entrant cross-sectional shape. As shown in the drawing[s] the members 14 have two vertically spaced corrugations 15 and 16 therein which form continuous longitudinal ribs 15a and 16a on the traffic side of the rail. The corrugations 15 and 16 are connected by an intermediate web portion 17 which forms a continuous longitudinal flat face 17a on the rail [column 2, lines 39 through 48].

Claim 1, the sole independent claim on appeal, recites a guardrail barrier comprising outer curves and a central portion positioned to provide "an effective depth of between 9 to 15 inches."<sup>2</sup> The appellants' specification indicates that an effective depth in this range contributes to the safety of

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<sup>2</sup>The effective depth of the guardrail barrier is measured "from the centerline of the uppermost curved portion of the barrier (horizontal radius) to the centerline of the lowermost curved portion (horizontal radius)" (appellants' specification, page 2).

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the guardrail barrier.

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The examiner has rejected claim 1 under 35 U.S.C. § 102(b) as being anticipated by each of Brown and Martin, and in the alternative under 35 U.S.C. § 103 as being obvious over each of Brown and Martin.

The rationale for the anticipation rejections (see pages 4 and 5 in the answer) seems to be that since each reference discloses a barrier having outer curves and a central portion, the various parameters recited in the claims (presumably including the effective depth parameter recited in claim 1) are inherent in the respective prior art structures.

As for the obviousness rejections, the examiner, allowing for the possibility that the recited parameters might not be inherent in the Brown and Martin barriers, has concluded that it would have been obvious "to choose to design within the claimed ranges as the use of optimum or workable ranges discovered by routine experimentation is ordinarily within the skill of the art" (answer, pages 4 and 5).

Neither Brown nor Martin expressly discloses any specific

effective depth figure, much less one falling within the claimed range. Indeed, neither reference even mentions guardrail barrier effective depth. Simply put, Brown and Martin are completely devoid of any factual basis supporting the examiner's determination that the barriers disclosed therein inherently have an effective depth meeting the particular range recited in claim 1.

Brown and Martin are also devoid of any factual basis supporting the examiner's conclusion that the effective depth specified in claim 1 would have been obvious as a matter of routine experimentation. While the discovery of an optimum value of a variable in a known process (or product) is normally obvious, exceptions lie where the results of optimizing the variable are unexpectedly good or where the parameter optimized was not recognized to be a result-effective variable.

In re Antonie, 559 F.2d 618, 620, 195 USPQ 6, 8-9 (CCPA 1977).

Here, neither Brown nor Martin provides any hint that the effective depth of the guardrail barriers respectively disclosed therein is an art recognized result-effective

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variable. In this light, it is evident that the examiner's conclusion of obviousness with respect to the subject matter recited in claim 1 rests on impermissible hindsight knowledge.

Accordingly, we shall not sustain:

a) the standing 35 U.S.C. § 102(b) rejection of claim 1, and of dependent claims 2 through 12 and 14 through 17, as being anticipated by Brown;

b) the standing 35 U.S.C. § 103 rejection of claim 1, and of dependent claims 2 through 12 and 14 through 17, as being obvious over Brown;

c) the standing 35 U.S.C. § 103 rejection of dependent claim 13 as being obvious over Brown.

d) the standing 35 U.S.C. § 102(b) rejection of claim 1, and of dependent claims 2 through 17, as being anticipated by Martin; or

e) the standing 35 U.S.C. § 103 rejection of claim 1, and of dependent claims 2 through 17, as being obvious over Martin.

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SUMMARY

The decision of the examiner to reject claims 1 through  
17 is reversed.

REVERSED

	IAN A. CALVERT	)	
	Administrative Patent Judge)	)	
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		)	
		)	
		)	BOARD OF
PATENT		)	
	CHARLES E. FRANKFORT	)	APPEALS
	Administrative Patent Judge)	)	AND
		)	
INTERFERENCES		)	
		)	
		)	
		)	
	JOHN P. McQUADE	)	
	Administrative Patent Judge )	)	



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